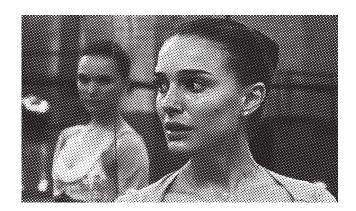
How Dare You Imitate Me, Exploring the notion of imitation in the mirror of performative arts

by Fabian Reichle, 2019

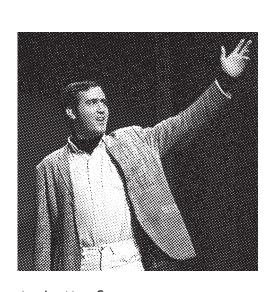
Thesis submitted for the degree of Master of Arts and Design, Radical Cut-Up, Sandberg Instituut, Amsterdam



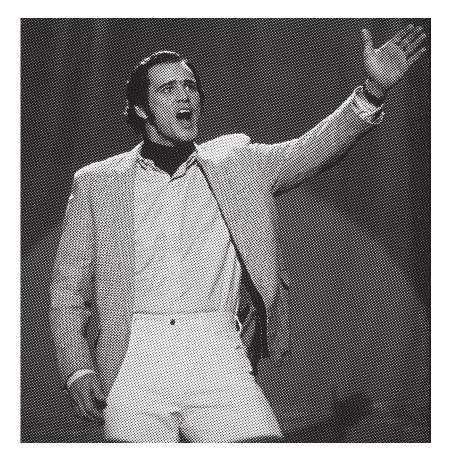
Ballet dancer Nina Sayers (played by Natalie Portman) is being stared back at by her evil self in <u>Black Swan</u> (Darren Aronofsky, 2010)

Table of Contents

Introduction	3
Imitation in the historical,	
cultural and scientific context	4
zero degrees	7
Montage for Three	10
Concluding thoughts/Last words	14
Acknowledgements/Works Cited	15
Footnotes	16



Andy Kaufmann



Jim Carrey as Andy Kaufman in <u>Man</u> on the Moon (Miloš Forman, 1999)

Dedicated to my brother Sebastian, the human I probably imitated first. You might be dead, but then again, not.	

Introduction – I remember, when I was a kid, the person I looked up to, observed and learned from the most was my one year older brother. Everything he did, I also wanted to do. When he started going to flute classes and I was still too young, I asked my parents if I could also have a flute, so when he practiced I could sit next to him learning from and with him. When he started going to primary school and he was learning the first steps in calculating, reading and writing, I would sit next to him at the table while he was doing his homework. One year later, soon after my own school enrollment, the teachers realized that I had somehow already gone through first grade and that I was a step further than my classmates, contemplating if I should skip a grade. With my brother, I had someone I could imitate and learn from. I was the parrot on his shoulder supporting him in fights with other kids underlining his statements, first with a shy but determined "yeah", later by imitating, rephrasing or even adding. But it was not only my brother whom I learned from.

My education in figure skating and dance as a young boy gave me the ability to be motorically in control of my body and to memorize movements easily. I believe that it provided me with certain advantages in order to learn movements really fast, so I could learn the Kata of my friends who were attending Karate lessons, without further ado land a backflip at first try or learn skateboarding by carefully examining tutorial DVDs from skateboarding magazines and subsequently applying the examined on the streets. My joy for imitation reached its peak when I discovered acting, as I joined the young theatre group of my hometown's theatre. When preparing for a role or improvising, I digged deep in my memories for characters I've observed and investigated or watched movies with characters I wanted to emulate whose personalities and attributes served as chart of colors to pick from.

I haven't been able to pursue my interest in imitation as an artistic form since leaving the world of theatre directly, but I presume it has been accompanying me as a phantom and has revisited me for a work I presented in summer 2018 at Melkweg Expo Amsterdam¹.

For the summer exhibition of the temporary program *Radical Cut-Up* from Sandberg Instituut, I had prepared a very personal piece of work. I presented a video installation where I'm portrayed doing a choreography, performed in two different stages of my life on two screens mounted next to each other: as a 13-year-old at an artistic roller skating competition in Catalunya, Spain and today in Amsterdam, The Netherlands. Before starting the project I was wondering how difficult it would be to redo the whole choreography. I had withdrawn from figure skating at the age of 15, after all. I meticulously reenacted the entire performance I discovered on the original video recording as much as I could. This time without skates but instead just trainers,



Ave Maria, Fabian Reichle, two screen video installation, 2:27 min

3



without costume but just casual shorts and a t-shirt stimulating memory and a sense of nostalgia.

Although what I've shown was a reenactment of my personal past, what sparked a fire in me was the process I went through in observing and learning the choreography again, which in the end triggered my motivation to write about imitation.

I realized how precious the ability to imitate is and how the level of precision in imitation distincts us humans from any other being on this planet. I started thinking about how every movement of my body works in a specific way because I once imitated somebody else and am able to assemble different movements. I detected similarities of this phenomenon in what the *Radical Cut Up* explores: how by copying others and reassembling their ideas one can create new things.

In this thesis I want to present the journey of my research, through which I found out that imitation is much more than just the replication of another individual's behaviour. I gave myself over to a chaotic and messy potpourri of terms and concepts such as mirror neurons, embodied simulation and empathy, attempting to discover a connection between all those. Afraid that I was going to be confronted with demystifying science, I fortunately stumbled across an interview with Semir Zeki, professor for neuroaesthetic at the University College London. He remembers the reactions to the presentation of his research about love, where he discovered a correlation between a 'good balance' of neurohormones and being in love.

"Then it was said, we disenchant love." As a response to their reaction he countered: "Do we disenchant the starry sky when we send spacecrafts to the planets?"²

Against this backdrop, I want to explore the following questions in this thesis:

How does imitation work? How is it defined?

Is there a straight line between deliberate and unconscious imitation?

What's the difference between imitation at the beginning of evolutionary history and today in times of hyper globalisation and digital revolution?

I want to introduce you to the historical and cultural context of imitation, acquaint you with an up-to-date state of scientific debates and in this way get closer to a universal notion, which I will then use as a basis to analyze two pieces of performing arts.

Imitation in the historical, cultural and scientific context—At the beginning of my research on keywords such as imitation, emulation and mirroring I came across the name of one neuroscientist whose words were resorted to in order to support statements in scientific papers of scholars from various fields: Vilayanur Subramanian Ramachandran.

I found an essay titled MIRROR NEURONS and imitation learning as the driving force behind 'the great leap forward' in human evolution where he made audacious future prospects:

"The discovery of mirror neurons in the frontal lobes of monkeys, and their potential relevance to human brain evolution—which I speculate on in this essay—is the single most important "unreported" (or at least, unpublicized) story of the decade. I predict that mirror neurons will do for psychology what DNA did for biology: they will provide a unifying framework and help explain a host of mental abilities that have hitherto remained mysterious and inaccessible to experiments."

These up-and-coming sentences echoed in my ears like a prophecy. Out of the 100 billion neurons⁴ active in the human brain, the firing (neurons fire⁵) of some of them could explain a broad spectrum of functions and activities of the human body. In a paper that aimed to summarize all the scientific discoveries made on mirror neurons so far, they are described as "a class of neuron that modulate their activity both when an individual executes a specific motor act and when they observe the same or similar act performed by another individual."⁶

A group of scientists from Parma surrounding neuroscientists unfamous Giacomo Rizzolatti have firstly observed the activity of these neurons in the macaque monkey ventral premotor area F5 around 30 years ago.⁷

"[...] the discovery of mirror neurons was exciting because it has led to a new way of thinking about how we generate our own actions and how we monitor and interpret the actions of others." It led to the notion that "action execution and observation are closely-related processes in terms of neuronal activity.

At the beginning this was a 'scientific' topic that didn't seem to be graspable for a non-scientific audience. But V.S. Ramachandran granted access to that audience.

Being a man described to deliver speeches "laced with wit and humor" and to receive "standing ovations" became "in great demand as a speaker, both for scientific and lay audiences" I figured that the charming persona of Ramachandran is not only the mirror system theory defender number one, but also the most known figure regarding his media presence when it comes to the mirror neuron system's public relations. In his TED talk from 2010 with the promising title *The Neurons That Shaped Civilization*, the word imitation was first brought in context with the mirror neuron theory for me.

He said that there is a subset of neurons that fire both when an action is executed and also when the same action is being observed.

> "And this is truly astonishing, 'cause it is as if this neuron is adopting the other person's point of view. It's almost as if it's performing a virtual reality simulation of the other person's action. Now, what is the significance of these mirror neurons. For one thing they must be involved in things like imitation and emulation. Because to imitate the other's complex act requires my brain to adopt the other person's point of view. [...] Now, let's look at [...] the phenomenon of human culture. If you go back in time, about 7500 years ago, let's look at human evolution. It turns out, something important happened, and that is a sudden emergence and a rapid spread of skills that are unique to human beings, like tool use, the use of fire, the use of shelter, the use of language and of course, the ability to read somebody else's mind and interpret somebody else's behavior.

[...] For a polar bear to evolve a coat will take thousands of generations. A human being—a child—can just watch its parent kill a polar bear, skin it and put the skin on its body and learn it in one step. What took the polar bear to learn in thousands of years, it can learn in five minutes, maybe ten. And once it's learned, it spreads in geometric proportion across the population. And this [...] imitational complex skills, is what we call culture and the basis of civilization."¹³

4

These first steps into my research filled me with excitement and I found myself in a state of ecstasy. A vast array of literature connected to this concept opened itself to me while exploring which role it could play in terms of imitation, ranging from cognitive sciences¹⁴ and philosophy¹⁵ to linguistics¹⁶, gender studies¹⁷ and theory of mind¹⁸, showing its connection to empathy in papers¹⁹ and even finding essays on possible link to sleep paralysis²⁰. From this perspective it seemed like "everyone [...] was jumping on the bandwagon."²¹ and practically anything was constituted with mirror neurons.

I started speculating myself: Is it possible that I'm good at lip-reading because I had a deaf friend as a kid, who would always look at my mouth so she would understand me and I automatically did the same? Could it be that my mirror system explains my talent of learning languages? Were these neurons firing when I was watching skateboarding tutorials and did they help me in translating it from a 'virtual reality simulation' into reality? I even went so far to think these neurons help us create embodied simulations in our dreams, which then express themselves in reality, like kicking or a wet dream.

At some point I realized that some of my own speculations seemed so far fetched that I asked myself whether maybe I had been somewhat brainwashed by the all-explaining magic of mirror neurons. Indeed, the theory around these neurons, intriguing both specialists and non-specialists, has become known as "the most hyped concept in neuroscience" 22.

The number of papers referencing to mirror neurons in order to explain their examined phenomenon in the past two decades grew exponentially (around 800 published and accessible papers on PubMed²³). While typing in V.S. Ramachandran into online search engines, I saw the dots vanishing from his name's initials, eventually transforming into a *vs* (versus), inviting me to scout his theory's opponents.

I asked myself if the answers that had been given, the hypotheses and conclusions that had been made, could serve as a simple explanation for how imitation works. Why does this particular discourse attract so much attention? Do we, as humans, like this idea so much because it potentially means that biologically we're capable of empathy? Is that what distinguishes us from animals? Instead of the term appearing as something magical, it suddenly popped up everywhere like a curse. I didn't feel comfortable in this state of ecstasy and I reluctantly forced myself to sober up.

In a paper from 2013 ²⁴ stating that during a passive viewing of exercise muscle sympathetic nerve activity, heart rate, respiration and skin blood flow was increased, words like mirror neurons or mirror system were nowhere to be found.

The curse had faded. Was the concept of mirror neurons a myth, induced by everybody who got worked up about it and wanted to become part of the conversation?

I still had to think about what Ramachandran said in his TED talk: "this imitational complex of skills is what we call culture" 25. The passing on of what one discovered or created, may it be fire, a tool or language to the neighboring village thousands of years ago is the birth of human 'civilization'. From a specific point of view one could say the knowledge on the theory around the mirror neurons has been passed around like that fire in human evolution. Only that with this knowledge, scientists misused it to easily burn down houses of question marks instead of giving them a subtle "period" by a new pair of pillars.

Cognitive neuroscientist Gregory Hickok has a well-grounded counter statement in his book *The Myth of Mirror Neurons—The Real Neuroscience of Communication and Cognition*.

"Curiously, all of this speculation about human behavior does not find its foundation in human neuroscience research at all. Instead, the theoretical keystone is a class of cells found in [the motor cortex of] pigtail macaque monkeys, animals that can't talk, don't appreciate music, and, frankly, aren't all that nice to each other."²⁶

[...]

"What is it about this apparently simple response pattern of mirror neurons in macaques that has excited an entire generation of scientists? How is it possible that a cell in the motor cortex of a monkey can provide the neural blueprint for human language, empathy, autism, and more?"²⁷

The tests that have been carried out on monkeys by scientists in Parma²⁸, could not be executed the same way on humans.

"The team employed the 'single unit recording' method in which microelectrode probes inserted in the brain measure electrical activity of single neurons [...] while the animal is performing a task."²⁹ This method can not be performed in the human brain "[...] except in exceptional medical circumstances."³⁰, which made recording MN³¹ activity in humans difficult.

In order to examine the human brain, techniques of neuroimaging have been developed (fMRI³²). However, "[...] activity of mirror neurons cannot yet be unambiguously detected using neuroimaging techniques"³³. Thus a clear statement is impossible.

Although the analogy from a monkey to the human is not that implausible, the scientists, who wrote What we currently know about mirror neurons commend that "great care must be taken when comparing the results from human and monkey studies. Specifically, readers must pay careful attention to the difference in the level of inference between the different modalities."

Although the apes from *The Jungle Book* are referred to as the Monkey People³⁵, which implies

a close connection between humans and apes, the story shows quite well, that the fact is, animals are not like humans, even the great apes, because they simply don't have the same skills. The allegory of the "The Red Flower" (here for fire) is present to this day and age. I guess the monkeys will have to keep on wishing:

Now, don't try to kid me, mancub I made a deal with you What I desire is man's red fire To make my dream come true

Now gimme the secret, mancub Come on, clue me what to do Give me the power of man's red flower So I can be like you

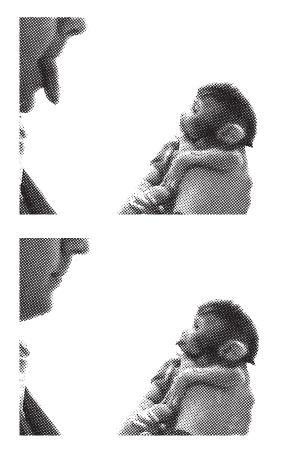
I Wanna Be Like You-Louis Prima³⁶

Regardless the debate and speculations grounded in the mirror system theory, looking at imitation can appear somewhat trivial, because to a certain extend it seems to be a very clear and simple function of the human organism in order to survive. When an individual observes another individual benefit from a certain action, it makes use of the ability to replicate this action to benefit from it as well, what has been called "imitation learning". 37

Another possibility of approaching the notion of imitation is through looking at it as a form of resonance.38, ^{39,} It implies that a body reacts to another body with the same gesture, he is exposed to. Some of the most obvious examples of resonance-and let me interpret them as automatic—are vawning when we see somebody else yawning, reacting to somebody who is smiling with a smile without being able to explain. It can be noticed when we cry watching movies where characters are in an emotionally devastated state, or even when opening the mouth, while trying to feed a baby indicating it has to open its mouth in order for the spoon to land in it. This form of imitation is somehow beyond our control. One may call it a reflex, a reaction, a form of automated empathetic communication, some may say it's associated with a so called emotional contagion. 40

Inspecting what I describe here closely, you may notice, these actions have the feature of being uncontrollable. And because both, the unconscious and uncontrollable imitation and the deliberate imitation are relevant in analyzing the two performances in the next chapters, I want to bring in how imitation can be divided into categories.

"The literature on imitation is as vast as it is heterogeneous and highly controversial, and the most debated issue concerns the identification of what should, and what should not be defined as 'imitation'. As a result, scientists have generated a plethora of new labels such as 'imitative learning', 'goal emulation', and 'true imitation' [...] it has been



Macaque neonatal imitation

proposed that this capacity is identified with the property of the observer's motor system to 'resonate' with that of the observed agent [...] This automatic embodied recognition of other's behaviors would render it possible for an observer to replicate the observed patterns of movements or the achievement of the same goals."

If we look at the evolution of imitation in the context of our times we can easily find examples of the different forms in which imitation expresses itself. Doing yoga by watching a video in which a yoga teacher presents the movements to be imitated. By moving to another city, because people we identify with have done so and appear to have better lives there. It also manifests itself when a toddler puts thumb and forefinger together and implicates to "zoom in" like on the touchscreen of its parents' smartphones.

Imitation is discussed in various scientific disciplines and has a big variety of faces. Like fire, it has two sides. It can be of great help, but it can also be dangerous, when we start playing with it. To provide you with an insight into these thoughts and exemplify some philosophical aspects on imitation let us have a look at the case studies I have chosen to present.

zero degrees – As a first example of an artwork, where imitation has been utilised with specific intentions. I have chosen to present the collaboration between the two choreographers and dancers Sidi Larbi Cherkaoui and Akram Khan. On their websites the performance is described as follows:

zero degrees (75min). Premiered on 8 July 2005, at Sadler's Wells, London. Performed by Sidi Larbi Cherkaoui and Akram Khan

Zero degrees started as a desire of award-winning dancer and choreographer Sidi Larbi Cherkaoui to dance a duet with Akram Khan, choreographer and dancer himself. Charkaoui soon discovered strong similarities in Khan's and his work when they first met in 2000. Cherkaoui is the son to a Moroccan father and Flemish mother and Khan is English from Bangladeshi descent. Both are sons of Islamic families brought up in Europe and both draw upon this meeting of cultures, combining complex Indian Kathak dance with the speed and precision of contemporary movement. Zero degrees was born out of their longing to create work together, and follows them on a journey to seek the reference point, the source, the "0" at life's core. Inspired by their own dual identities, the two search for this middle point where the cultures meet through polar opposites represented by two lifelike dummies, copies of Cherkaoui and Khan. 42, 43

You might ask yourself, why I chose a dance performance piece in order to dive into some reflective thoughts on imitation. Isn't it self-evident that in order to learn a dance style or to communicate through dance, one requires the skill to imitate? You will see that I chose this peace, because of the way that imitation is dealt with and which purpose it has.

The part of this performance which is central for my analysis lies in the account of a tragic anecdote by both performers divided in several parts. It serves as a central theme that they always get back to throughout the performance. In the beginning they sit next to each other, cross-legged, in the middle of the gray, diminished stage, all the way at the front, close to the audience. The story starts with an unpleasant experience at the border on a journey from Bangladesh to India. At first, it is told by both from the same perspective with the same gestures and in the same tone, completely in sync. Cherkaoui and Khan together sound like one person with a reverb effect on the voice, as if one could hear the reflections of soundwaves in a bigger space. The narrator in the story is standing in line with his cousin to get onto a bus to cross the border and suddenly, for unknown reasons, is asked to show his passport by some powerful looking men to be checked. The scene was obscure because the guards didn't look like the guards in the western

world, dressed in a slick uniform, but were just wearing normal clothes—invoking a feeling of mistrust

As a spectator, I become soaked into the story, impressed by the synchronized movements of the two bodies in the casual telling of this anecdote, sometimes mumbling, sometimes a bit too fast, just as if they would be telling this story to a friend for the first time, which is unlike usual theatre speech, that can often sound quite scripted.

His British passport, colored red, was easy to trace going from the hands of one guard to the next and easy to distinguish from other passports in their hands, as those of native bangladeshis were green. I'm assuming this story must be reported from Khan's perspective. And I realize, Cherkaoui is telling the story as if it was something that had happened to him. He is imitating Khan in detail, adapting his style of gesticulation and his way of speaking in dynamic and level. They speak about the vulnerability he experienced in giving away his passport, the only piece of paper he could legally identify himself with. Due to his physical appearance having its roots in Bangladesh, he was afraid the guards would discriminate him as Bangladeshi and therefore not give him back his red passport.

I presume Cherkaoui's purpose of imitating Khan lays in trying to fully understand what Khan must have felt that moment. He doesn't only adapt Khan's perspective in his mind, but by acting like him in some way he impersonates him, and slips into his skin. According to interviews⁴⁴ in the context of this collaboration, this story has been part of a series of recorded conversations in which they were getting to know each other. What might have appeared as a 'virtual reality simulation' in Cherkaoui's brain while Khan was telling him this story, is now to be seen on stage.

Maybe by playing the same part, he fulfils the act of expressing his empathy. At the moment in the story when a slightly panicky ambience erupts and Khan expresses his feeling of the ground slipping away underneath his feet, the dancer's bodies start to fade from synchronized to mirrored and fusion into something like a symbiotic entity as if they would be to meet somewhere on the same level with the same starting point and understanding, in the description of the performance, "the "0" at life's core". The question of identity arises: Who am I actually, if I forget about what's written on the paper, if I just forget everything for a moment? What is it that characterizes me and makes me to who I am and what am I to others?

Watching the performance I ask myself, how relevant the choreographer's personal backgrounds for this performance are.

The duet in form of a dance follows. Their arms fold and unfold and entangled with their elbows they seem to go through some kind of metamorphosis. With more lights turning on, their shadows appear on the back drop. Although their bodies drift apart, the shadows engage with each other.

Then the life size dummies, copies of themselves that were laying at the left and right end side on the floor of the stage are brought into the choreography.

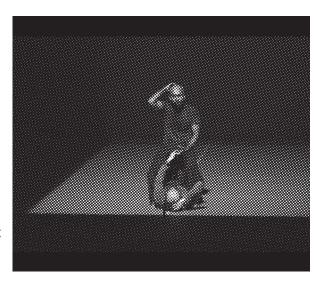
They become introduced as some sort of avatars, phantoms or alter egos, maybe their souls. They carry their identity in them. To me they represent the archive, hence the memories of experiences and skills they have learned, their objectives and achievements throughout their lives. When Cherkaoui approaches the dummy of himself he first shakes his hand, is caressed by the dummy and then all of a sudden hit and choked.

I understand it as a fight with attributes we don't always want to face, but cannot ignore. All these properties that supposedly represent us, what do they actually mean?

As if starting from scratch, at the moment of birth, attempting first vocal expressions, Khan starts to create a rhythmic scatting with his voice while Cherkaoui carefully observes. He then suddenly joins the scatting and succeeds at the first attempt. Together, they continue this rhythmic vocalization in unisono, as if they had created a language, suggested by Khan, adapted by Cherkaoui by the help of the ability to imitate.

I had difficulties to retrace Cherkaoui's intentions to empathize with Khan by reenacting his experience. Even though they appear to have all these similarities on the surface, Cherkaoui stating "I know how you feel!" seemed hypocritical to me. They are simply not one and the same person and he will never fully be able to see the world through Khan's eyes, may he imitate him as much as he wants. By letting go of his own 'self' in the performance and opening to a new perspective he learns the nother's language, a body language represented in their dancing and exchange of movements and experiences. In the choreography and gestures they create a base they could both possibly take as universal to meet in the middle. I want to link this idea of approaching each other through the creation of a new language with an inspiring passage by Maurice Merleau-Ponty from his book Phenomenology of Perception:

The full meaning of a language is never translatable into another. We may speak several languages, but one of them always remains the one in which we live. In order completely to assimilate a language, it would be necessary to make the world which it expresses one's own, and one never does belong to two worlds at once. [...] If there is such a thing as universal thought, it is achieved by taking up the effort towards expression and communication in one single language, and accepting all its ambiguities, all the suggestions and overtones of meaning of which a linguistic



zero degrees (75 min), 2005, Sidi Larbi Cherkaoui and Akram Khan

8

tradition is made up, and which are the exact measure of its power of expression. A conventional algorithm—which moreover is meaningful only in relation to language—will never express anything but nature without man.⁴⁶

We're brought back to the narrative of the story in the performance. One of the guards demands a gift, if Khan wants to have his passport back. Khan, indicating to hit the guard by striking out his arm, says:

"We've been waiting here long enough. You give me back my passport, or I will complain to the British council and then I will have, I will have your job!"

Looking at audience explaining his intentions, "I wanted to intimidate him."

Cherkaoui, despite being physically in the role of the guard defending himself by holding the arm Kahn tried to threaten him with, now takes over the narrating and continues speaking for Khan.

"The energy of anger turned into the energy of complete fear and I realized what a fool I had made out of myself. Fear had kind of sipped into me, simply because I hadn't created an effect on this person and what I had hoped hadn't happened.

He didn't flutter his eyelashes, he didn't feel any fear and instead he only felt stronger. So anyway now we got passed this guard..."

Is Cherkaoui imitating here, or is this the expression of a foreseeing quality, a possible correlation between imitation and the theory of mind? How could he assume, what the next thing to happen would be in the course of the story? If I would be to describe Cherkaoui's development in the words of primatologist and ethologist Frans B.M. de Waal "[...] imitation runs from shared emotions and intentions to a gradual 'unblurring' of the lines between individuals." Cherkaoui's "[...] own experience is increasingly set apart from the vicarious one, even though both reside within the same brain and body. This process culminates in a cognitive appraisal of the other's behaviour and situation: we adopt (he adopts) the other's perspective."

NAME	AKRAM KHAN	SIDI LARBI CHERKAOUI
YEAR OF BIRTH	1974	1976
BORN TO	Bangladeshi parents	Flemish mother, Morrocan father
IN	London, GB	Antwerp, BE
RELIGION ONE WAS RAISED IN	Islam	Christianity/Islam
PROFESSION	choreographer and dancer	dancer and choreographer
SPECIALIZED IN	Khatak dance	contemporary dance forms
ETHNIC APPEARANCE	South Asian	European
SKILLS	see, hear, sing, speak, feel, fully functional body, dance, imitate	see, hear, sing, speak, feel, fully functional body, dance, imitate

The peak of the story is reached with a train ride to Kolkata. A man on the train that had stayed in one and the same position since they had jumped on it appears to be dead. His wife is crying and asking for help, to put him off the train at the next stop. When Khan wants to help he is pulled back by his cousin, who forbids him to touch the dead body and wait for a police officer or the station master to come. Khan is stunned and can not believe nobody is coming to help. His cousin later explains that if he would have touched that man, the station master would not have let him go and would have blamed him for being involved in the death of the man. He says:

"...that's the way they work, they wouldn't have let you go, they just blame you for it, harass you for it, they need somebody to blame.

They would have said: 'Why did you touch him? Why did you kill him?

If you didn't kill him why were you beside him?"

In an interview⁴⁸ Khan talks about his paradoxical feelings of belonging, because in London he realizes how Bangladeshi he is, but then when he's in Bangladesh he realizes how British he is. Torn between these cultures he states he's never complete in one place. In Bangladesh—the home of his

"roots"—this is evident in the fact that he is unfamiliar with the rules and procedures to navigate these situations.

Merleau-Ponty writes: "It is no more natural, and no less conventional, to shout in anger or to kiss in love" or in this particular case in Khan's story, to help when somebody has died in public. "Feelings and passional conduct are invented like words." Khan experiences this feeling of not belonging, by dialectically analyzing, which norms he can not identify with. A quite suitable example of a daily condition is that in Britain shaking one's head would be an expression of disapproval while in southern Asia it could be perceived as an agreement.

The main focus in this part of the performance lays in Khan dealing with his own cultural identity and questioning his "belonging". And Cherkaoui by co-experiencing this series of events through imitation is being carried away on a meta-level by slipping into Khans skin conveying appreciation and compassion.

Montage for Three—The second work that I would like to introduce to you is by choreographer Daniel Linehan. In his work the notion of imitation is present in the methods used during planning, preparing, developing and shaping the actual choreography.

Montage for Three (25min). 2009. Concept and choreography by Daniel Linehan. Performed by Daniel Linehan and Salka Ardal Rosengren

Montage for Three is a choreography-of-images for two dancers and one projector. It takes its source material entirely from found photographs, both famous and obscure. These images are projected alongside the two dancers, who embody the photographs with the absurd and impossible aim of giving presence to something which is absent. The living/moving/present bodies confront the mechanical/static/reproduced bodies in such a way that the two forms begin to merge and exchange roles. The dancers become a trigger for the viewer's memory, as the still images begin to take on a life of their own.⁵⁰

I have never seen Daniel Linehan perform live. When I first watched excerpts of his work *Montage for Three* online some time ago, they immediately got me hooked and so I decided coming back to write about it. What I find exciting is the accurate portrayal of the fluidity and borderless travel of imagery through bodies. Like this it captures the problematic facets of the imitation. The relevance of this topic today is something I would like to foreground in my analysis.

The performance consists of several chapters and in one of the first ones, titled *Motion Capture*, you can see Linehan on stage mimicking the poses of a person in photographs projected to the wall behind him. Presented in the form of a dia show, the images are shown for a few seconds before switching to the next one.

Linehan abruptly changes positions at the same moment a new image appears on the backdrop. The images are black and white stills of Alfred Hitchcock in a movie, looking into the camera, seemingly explaining something to the viewer. As such, Linehan embodies the frozen poses of the actor on the screen, constructing the choreography chronologically through the projection by imitating.

At some point the images on the back wall disappear and Linehan continues with a new, however, still similarly abrupt, choreography. The spectators are exposed to another series of positions they have not seen before. In a certain way this continuation of motion, without the images in the backdrop, indicate that he is now able, not knowing the images that will follow, to predict what is to come. He comes to rest in a pose rolled up on the floor and the slide-

show initiates a new series of images. This time, it is not only images of Hitchcock, yet the images of various people in action from different angles that could be theatre makers, dance instructors, educators using wild gestures to share knowledge. It is the poses that Linehan has just presented before ending up on the floor.

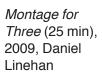
Once the person in the focus of the sequence of images arrives at the same pose as Linehan, the projector turns off again.

Linehan then initiates a second sequence without images which ends in another frozen pose. What follows is, as by now expected by the audience, a series of images on the wall. They are wellknown photographs of prominent characters that have shaped recent history in significant poses. Einstein showing his tongue, pope John Paul II greeting, Adolf Hitler saluting and Winston Churchill giving us his signature move - the peace or in this case rather victory fingers. Like in the description of the performance⁵¹, the entire choreography's source of movements comes from the images. Until now, the projected images and Linehan himself are the only two mediums of expression, playing a game of exchanging movements. Linehan as a human uses his qualities to learn and replicate the poses of the men in the pictures. He repeats all the movements he has learned until now, this time speeded up and in a different order which makes it look like a new choreography with more flow, but still abrupt. He stops in a position pointing at the third medium that is brought into the performance: the second dancer. The performance does certainly not end here, but the part that's essential for my analysis lays in front of us.

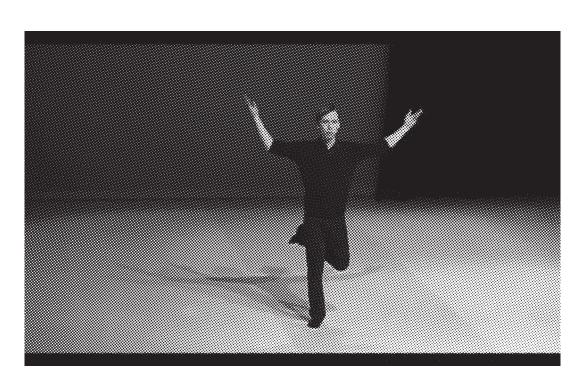
Seeing Linehan's imitation of the persons on these photographs is a very powerful image and triggers broader associations in me. I ask myself whether the decision to imitate these people happens consciously or unconsciously. While in the previous analysis of A. Khan's and S.L. Cherkaoui's performance I have looked at imitation as a purposeful act, it also regularly appear as an uncontrollable phenomenon in our everyday lives. For instance, if we find ourselves using the same gestures as our parents, this may be because we have unconsciously absorbed and studied their moves.

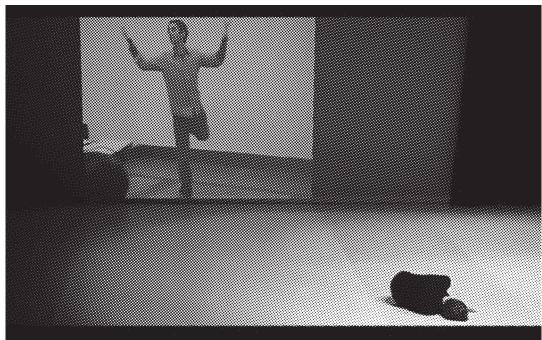
To me Linehan's performance speaks about the influences of what surrounds us in everyday live, and how they infiltrate our society by expressing themselves in the way we move, speak, hear and look at things. Sources of influence are propagated, especially if we contextualise it in an increasingly digitized world. There is no escaping the many screens on our phones and computers, the devices that extend our arms, supposedly perk up our ears and widen our sight;

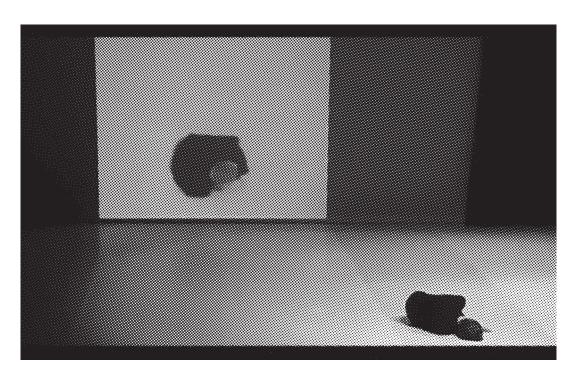
The travel of knowledge, behaviours, sound, video footage and imagery in a world of technologies, where we're wired to the internet, a pool that's being filled up with content day by day is a journey

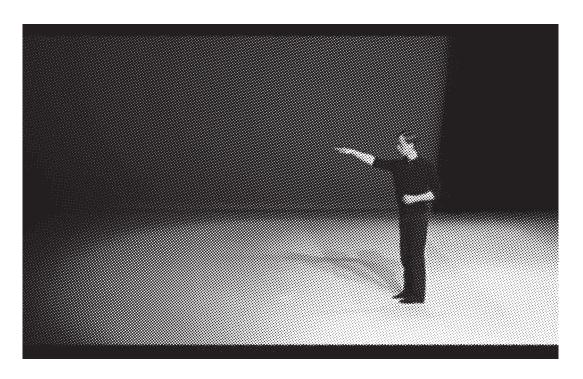


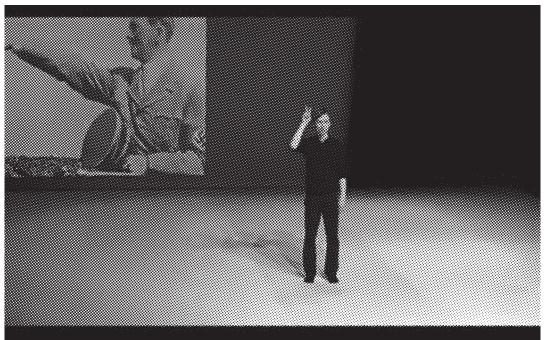


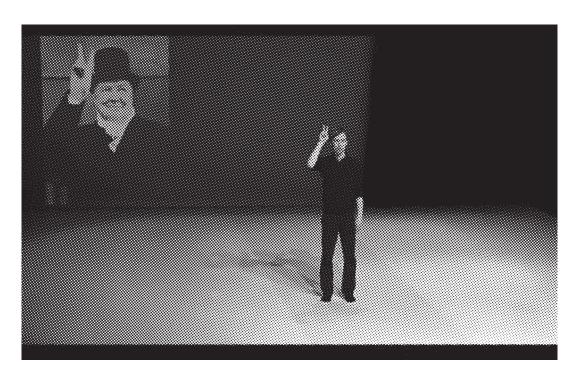












that has no finite destiny. We have new sources to imitate from: scary, dubious, profound, funny and random ones.

Let us have a look at the spread of the "dab", just to name an example of a dance move that has been circulating the globe the past few years.

According to Wikipedia it is performed by "dropping the head into the bent crook of a slanted, upwardly angled arm, while raising the opposite arm out straight in a parallel direction"⁵². Although it is described to have its roots in North-American youth culture it can be seen practiced all over the planet as a gesture of triumph. Through its popularity this fad has spread virally, reaching billions of people in the world through online video and image platforms like Youtube⁵³ and 9gag⁵⁴ and Imgur.⁵⁵ The hype around the move invited people to imitate it, and in this way formed a possible universal element of global culture.

Still, like with the game *Flüsterpost*,⁵⁶ not everybody at the end of the line understands this gesture's objective, as if there was a glitch in the imitation and some details were missing.⁵⁷

Another example that emphasizes the phenomenon of information loss quite well and how by passing it on from one to another something new is being created, can be seen in an experiment by artist Pete Ashton.

He re-posted an image on instagram a hundred times with the aim to show what this processing does to it. He describes it as such: "Each reposting introduces generational loss as the image is transcoded from PNG to JPG and optimised by Instagram. While initially irrelevant, the loss adds up and the image degrades." 58

If we compare the first with the second image, the difference is almost unnoticeable, whereas if we compare the first with the last image the similarities are almost unrecognizable.

If we look at *Montage for Three* again, we can see how through repetitive imitation a similar loss of recognizability transpires to the movements and poses of the dancers. They're being passed on and travel from one body to the next. While the speed of the sequences is accelerated, the order changes and they're put it into a different context and therefore they obtain different purposes.

That the sources to imitate from have augmented is undoubtable. And hence, I wonder if in the future of our globalizing world, imitation is going to define a global culture, so that it will be more and more difficult to distinguish between geographical cultures, because of the effortless shareability of information.

13

Concluding thoughts—In a certain way, Cherkaoui and Khan attempted an experiment in zero degrees. Instead of relying upon the concept of mirror neurons in the form of a 'virtual reality simulation' in one's brain in order to empathize and understand the other's experiences, actions and behaviours, they decide to make Cherkaoui imitate and enact the events from Khans perspective, so that the simulation is real and loses its virtual aspect. Whether empathetic behaviour and a better understanding can result from this experiment is out of the question. It's a poetic image of a human trying by all means to understand another human being through an embodied imitation.

In the case of *Montage for Three*, to me, the intentions of this performance are more to show an observation than to make a statement. We imitate what we see and hear, without sometimes even noticing it. This opens up the question whether we even have the choice to avoid imitation. It encourages me to be attentive towards my surrounding, but on the other hand I ask myself, do I even have a choice not to fall into the trap of imitating something while I'd actually rather not?

More even today, where traps can appear on every corner in the form of surreptitious advertising (in the virtual as well as in the real world) or TV-Show binge watching, just to name a few, where behaviours can be memorized unconsciously and express themselves in a later imitation. The concept of mirror neurons underlines this theory by the idea that when they fire they create a simulated enactment of imitation.

We might be underestimating our talent to imitate, in times when evolution feels controlled, manufactured and manipulated. If we're not aware and conscious, we may end up doing the *Hitler salute* without knowing how that happened, just like Linehan.

Last words—Throughout the process of my research, I noticed that more questions arose than answers. In this complex web of derivative conclusions that are tangent to the notion of imitation, it is difficult to find a clear definition. Yet, it is, if not the biggest, then at least my dearest concern to transmit this very thought in my writing. As such, I understand the intentions of my thesis in opening up an unstable state of knowledge in order to start a conversation—beyond different disciplines.

Reflecting upon imitation within the performative arts and at the same time immersing myself in scientific discoveries and myths, philosophical questions and poetic words for the examination of the two case studies, I was reminded of Merleau-Ponty:

"In the realm of speech, each writer is conscious of taking as his objective the same world as has already been dealt with by other writers." 59

In my first steps of writing, trying to define my approach to imitation, my teacher Amie Dicke witnessed how I was "imitating a language of curators". I was "writing in a style that didn't correspond to my personal voice." But wasn't my personal voice an assemblage of the books, movies, music, conversations and photographs around that influenced me?

I'm imitating a language I did not grow up with, and I'm quoting other writers whose words have been translated to dare the jump into the deep end and attempt to speak about imitation to create a universal understanding. And I felt encouraged to do so in an experimenting way with my writing, always having in mind that the purpose of my master program *The Radical Cut-up* is to "celebrate(s) the emergence and evolution of the cut-up as the contemporary mode of creativity" and to "copy, combine and create" 60. Hickok writes:

"We admire social trendsetters and political leaders, while we scold our kids for following the (wrong) crowd. We reward entrepreneurial innovators in design and technology, while we take the copycats to court for patent infringement. We give lofty awards to individuals with novel ideas and unique accomplishments in the arts and sciences, while we devalue derivative efforts and punish plagiarism. Imitation, whether it's wannabe crab or a cubic zirconium, is rarely valued."61

By all this we deny that imitation is humane. We are conglomerations of influences and should be careful when we denounce each other as copies, fakers and plagiarists.

I dare you not to imitate.

Acknowledgements – Thanks to Rebekka Hoelzle Works Cited for her attentive eye, reflective thoughts and helpful hand. Thanks to Bart de Baets for sticking with me through these intense times. Thanks to Amie Dicke for inspiring talks. Thanks to my family and friends for all the love and support. And thanks to Nancy Jouwe and Lukas Feireiss.

Ashton, Pete. Sitting in Stagram, www.art.peteashton.com/sitting-in-stagram/, 2015

Bråten, Stein. On Being Moved from Mirror Neurons to Empathy, John Benjamins Pub. Co., 2007.

Brown, Rachael, et al. Increases in Muscle Sympathetic Nerve Activity, Heart Rate, Respiration, and Skin Blood Flow during Passive Viewing of Exercise, Frontiers in Neuroscience, vol. 7, 2013

Cheng Y.W., Tzeng O.J., Decety J., Imada T., Hsieh J.C. Gender differences in the human mirror system: a magnetoencephalography study, NeuroReport, 17 (11): 1115-9, 2006

Cherkaoui, Sidi Larbi. zero degrees, Premiere: Sadler's Wells, July 8th, 2005

Craighero, Laila and Rizzolatti, Giacomo. The Mirror-Neuron System. Annual Review of Neuroscience, vol. 27, no. 1, 2004, pp. 169 - 19

Feireiss, Lukas. www.radicalcutup.com/About, Sandberg Instituut, 2017

Ferrari, P. F., et al. From Monkey Mirror Neurons to Primate Behaviours: Possible 'Direct' and 'Indirect' Pathways. Philosophical Transactions of the Royal Society B: Biological Sciences, vol. 364, no. 1528, 2009, pp. 2311-2323.

Gallese, Vittorio, et al. Action Recognition in the Premotor Cortex, Brain, vol. 119, no. 2, 1996, pp. 593-609.

Hickok, Gregory. The Myth of Mirror Neurons: the Real Neuroscience of Communication and Cognition, W.W. Norton, 2014.

Jalal, Baland, and Vilayanur S. Ramachandran. Sleep Paralysis, 'The Ghostly Bedroom Intruder and Out-of-Body Experiences: The Role of Mirror Neurons, Frontiers in Human Neuroscience, vol.

Jarrett, C.B. Mirror neurons: the most hyped concept in Neuroscience?, Psychol, Today, 2012, www.psychologytoday.com/blog/ brain-myths/201212/mirror-neurons-the-most-hyped-concept-inneuroscience

Keysers, Christian. The Empathic Brain: How the Discovery of Mirror Neurons Changes Our Understanding of Human Nature, Social Brain Press 2011

Khan, Akram. zero degrees, Premiere: Sadler's Wells, July 8th, 2005

Kilner, J.M., and Lemon, R.N. What We Know Currently about Mirror Neurons, Current Biology, vol. 23, no. 23, 2013.

Kipling, Rudyard. The Jungle Book, Brockhaus, 1913.

Lemon, R.N. and Kilner, J.M. What We Know Currently about Mirror Neurons. Current Biology. vol. 23, no. 23, 2013.

Linehan, Daniel. Montage for Three, Coproduction: P.A.R.T.S. Bruxelles, Rencontres Chorégraphiques Internationales de Seine-Saint-Denis, 2009

Mastin, Luke. Neurons & Synapses, www.human-memory.net/ brain_neurons.html, Humanmemory.net, 2018

Meltzoff, Andrew N. The Imitative Mind: Development, Evolution and Brain Bases, Cambridge Univ. Press, 2011.

Meltzoff, Andrew N. and Decety, J. What imitation tells us about social cognition: a rapprochement between developmental psychology and cognitive neuroscience, Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences. 358 (1431): 491-500, 2003.

Merleau-Ponty, Maurice. *Phenomenology of Perception*, Routledge & K. Paul, translated by Colin Smith, 1962.

Pellegrino, G. Di, et al. Understanding Motor Events: a Neurophysiological Study, Experimental Brain Research, vol. 91, no. 1. 1992.

Ramachandran, Vilayanur S. MIRROR NEURONS and Imitation Learning as the Driving Force behind the Great Leap Forward in Human Evolution, Edge.org, www.edge.org/conversation/mirror-neurons-and-imitation-learning-as-the-driving-force-behindthe-great-leap-forward-in-humanevolution, 31.05.2000

Ramachandran, V.S. www.youtube/s_SDvafWRiU?t=91, Being Human, Fora.tv, 2010

Ramachandran, Vilayanur S. www.youtube.com/ watch?v=l80zgw07W4Y&t=21s, TED-ed

Rizzolatti, Giacomo and Craighero, Laila. The Mirror-Neuron System, Annual Review of Neuroscience, vol. 27, no. 1, 2004, pp. 169-192.

Rozzi, Stefano, et al. Mirror Neurons and Imitation, Routledge Handbook of Motor Control and Motor Learning, 2012.

Sherman, Robert and Richard, Wanna Be Like You Walt-Disney Studios, Media Group Inc., www. genius.com/Louis-prima-i-wanna-be-like-you-from-the-junglebook-lyrics, 1967

Singer, T. Empathy for Pain Involves the Affective but Not Sensory Components of Pain, Science, vol. 303, no. 5661, 2004, pp. 1157-1162.

Zeki, Semir. Wahrnehmung: Schönheit Ist Lebensnotwendig Zeit Online, www.zeit.de/ zeit-magazin/2019/02/wahrnehmung-schoenheit-gehirn-vorgang-aesthetik-semir-zeki, 7 Jan. 2019

Footnotes

- Melkweg Expo is an open platform and exhibition space connected to the concert venue Melkweg Amsterdam
- Zeki, Semir. Wahrnehmung: 'Schönheit Ist Lebensnotwendig.' ZEIT ONLINE,
 7.1.2019, www.zeit.de/zeit-magazin/2019/02/wahrnehmung-schoenheit-gehirn-vorgang-aesthetik-semir-zeki
- 3. Ramachandran, V.S. Mirror Neurons and Imitation Learning as the Driving Force behind the Great Leap Forward in Human Evolution, Edge.org, 31.05.2000, www.edge.org/conversation/mirror-neurons-andimitation-learning-as-the-drivingforce-behind-the-great-leap-forward-in-human-evolution
- 4. Mastin, Luke. *Neurons & Synapses*, Human-memory. net, 2018, www.human-memory. net/brain_neurons.html
- 5. Ramachandran, V.S. *Talk:* title unknown, Youtube channel: Fora.tv, 2010, youtu. be/s_SDvafWRiU?t=91
- 6. Kilner, J.M. and Lemon, R.N. What We Know Currently about Mirror Neurons, Current Biology, vol. 23, no. 23, 2013
- 7. ibid., p. 1
- 8. ibid., p. 4
- 9. ibid.
- Ramachan dran, V.S. Mirror Neurons and Imitation
 Learning as the Driving Force behind the Great Leap Forward in Human Evolution, Edge.org, 31.05.2000, www.edge.org/conversation/mirror-neurons-andimitation-learning-as-the-drivingforce-behind-the-great-leap-forward-in-human-evolution
- 11. ibid.
- 12. ibid.
- 13. Ramachandran, V.S. *Talk: title unknown*, Youtube
 channel: TED-ed, www.youtube.com/watch?v=l80zgw07W4Y&t=21s
- 14. Meltzoff, Andrew N. The Imitative Mind: Development, Evolution and Brain Bases, Cambridge Univ. Press, 2002
- Bråten, Stein. On Being Moved from Mirror Neurons to Empathy, John Benjamins Pub. Co., 2007
- 16. Keysers, Christian. The Empathic Brain: How the Discovery of Mirror Neurons Changes Our Understanding of Human Nature, Social Brain Press, 2011
- 17. Cheng Y.W., Tzeng O.J., Decety J., Imada T., Hsieh J.C. Gender differences in the human mirror system: a magnetoencephalography study, NeuroReport 17 (11): 1115–9, 2006

- 18. Meltzoff, Andrew N. and Decety, J. What imitation tells us about social cognition: a rapprochement between developmental psychology and cognitive neuroscience, Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences. 358 (1431): 491–500, 2003
- 19. Rozzi, Stefano et al. *Mirror Neurons and Imitation*, Routledge Handbook of Motor Control and Motor Learning, 2012
- 20. Jalal, Baland, and Ramachandran, V.S. Sleep Paralysis, 'The Ghostly Bedroom Intruder' and Out-of-Body Experiences: The Role of Mirror Neurons, Frontiers in Human Neuroscience, vol. 11, 2017
- 21. Hickok, Gregory. The Myth of Mirror Neurons: the Real Neuroscience of Communication and Cognition, W.W. Norton, 2014
- 22. Jarrett, C.B. Mirror neurons: the most hyped concept in Neuroscience?, Psychology Today, 2012, www.psychologytoday.com/blog/brain-myths/201212/mirror-neurons-the-most-hyped-concept-in-neuroscience
- 23. Kilner, J.M. and Lemon, R.N. What We Know Currently about Mirror Neurons, Current Biology, vol. 23, no. 23, 2013
- 24. Brown, Rachael et al. Increases in Muscle Sympathetic Nerve Activity, Heart Rate, Respiration, and Skin Blood Flow during Passive Viewing of Exercise, Frontiers in Neuroscience vol. 7, 2013
- 25. Ramachandran, V.S. *Talk: title unknown*, Youtube channel: TED-ed, www.youtube.com/watch?v=l80zgw-07W4Y&t=21s
- 26. Hickok, Gregory. The Myth of Mirror Neurons: the Real Neuroscience of Communication and Cognition, W.W. Norton, 2014, p. 9
- 27. ibid.,p. 10
- 28. Di Pellegrino, G. et al. *Under standing Motor Events:*a Neurophysiological Study,
 Experimental Brain Research,
 vol. 91, no. 1, 1992, pp. 176–180
- 29. Hickok, Gregory. The Myth of Mirror Neurons: the Real Neuroscience of Communication and Cognition, W.W. Norton, 2014, p. 19
- 30. ibid., p. 50
- 31. MN = mirror neuron
- 32. Kilner, J.M. and Lemon, R.N. What We Know Currently about Mirror Neurons, Current Biology, vol. 23, no. 23, 2013
- 33. ibid., p. 5
- 34. ibid., p. 32

- 35. Kipling, *Rudyard The Jungle Book*, Brockhaus, 1913
- 36. Sherman, Robert and Richard. *I Wanna Be Like You-oo-oo*, Walt Disney Studios, 1967, genius.com/Louis-prima-iwanna-be-like-you-from-the-jungle-book-lyrics
- 37. Rizzolatti, Giacomo and Craighero, Laila. *The Mirror-Neuron System*, Annual Review of Neuroscience, vol. 27, no. 1, 2004, pp. 169–192
- 38. Ferrari, P.F. et al. From Monkey Mirror Neurons to Primate Behaviours: Possible 'Direct' and 'Indirect' Pathways, Philosophical Transactions of the Royal Society B: Biological Sciences, vol. 364, no. 1528, 2009, pp. 2311–2323
- 39. Meltzoff, Andrew N. *The Imitative Mind: Development, Evolution and Brain Bases*, Cambridge Univ. Press, 2011
- 40. Singer, T. Empathy for Pain Involves the Affective but Not Sensory Components of Pain, Science, vol. 303, no. 5661, 2004, pp. 1157–1162
- 41. Rozzi, Stefano, et al. *Mirror Neurons and Imitation*, Routledge Handbook of Motor Control
 and Motor Learning, 2012
- 42. www.east-man.be/en/ 14/44/Zero-Degrees
- 43. www.akram- khancompany. net/productions/zero-degrees-2005/
- 44. Khan, Akram and Cherkaoui, Sidi Larbi. zero degrees, Axiom Films, 2008, www. worldcat.org/title/zero-degrees/ oclc/605389422
- 45. www.youtube.com/watch?v= s_SDvaWRiU&inde=7&list= PLL_Z0iS8hGXVSKNeb-8m5OZr5-14xc2Xi&t=92s
- 46. Merleau-Ponty, Maurice. Phenomenology of Perception, Routledge & K. Paul, 1962, p. 218
- 47. Bråten Stein. *On Being Moved from Mirror Neurons to Empathy*, John Benjamins
 Pub. Co., 2007, p. 51
- 48. Khan, Akram. zero degrees, www.worldcat.org/title/ zero-degrees/oclc/60538922, Axiom Films, 2008
- 49. Merleau-Ponty, Maurice. Phenomenology of Perception, Routledge & K. Paul, 1962, p. 220
- 50. dlinehan.wordpress.com/ works/
- dlinehan.wordpress.com/ works/
- 52. Dab (dance), *Wikipedia*, en.wikipedia.org/wiki/Dab_ (dance)

- 53. What is the dab? The history and meaning of the popular dance and memes, Youtube channel: Behind the meme, www.youtube.com/watch?y=GRpJk1uERKA, 2016
- 54. Love my lil bro, 9gag.com/ gag/az9qxYK
- 55. Dab, *Kiwi- squirrel*, imgur. com/gallery/KIV30r8
- 56. also known as chinese whispers
- Teen Grounded For 'Dabbing' During Swearing-In
 Ceremony With Speaker Paul
 Ryan, Youtube channel: Inside
 Edition, 2017, www.youtube.com/
 watch?v=W-H7
 I7CoZjc
- 58. Ashton, Pete. Sitting in Stagram, courtesy of the artist, 2015, www.art.peteashton.com/ sitting-in-stagram/
- 59. Merleau-Ponty, Maurice. Phenomenology of Perception, Routledge & K. Paul , 1962, p. 221
- 60. Feireiss, Lukas. About the Radical Cut-Up, Sandberg Instituut, 2017, radicalcutup.com/ About
- 61. Hickok, Gregory. The Myth of Mirror Neurons: the Real Neuroscience of Communication and Cognition, W.W. Norton, 2014, p. 313